



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

THE SUBSPECIES OF THE OREGON JAY

By H. S. SWARTH

(Contribution from the Museum of Vertebrate Zoology of the University of California)

IN A RECENT paper on the races of *Perisoreus obscurus**, the author, Dr. Harry C. Oberholser, arrives at certain conclusions, interesting in themselves but resulting in a systematic treatment of the species which it seems to the present writer contains a large element of error. Briefly, the important features of the paper are the description of a new subspecies, *Perisoreus obscurus rathbuni*, from the Olympic Mountains and Puget Sound regions, the restriction of *P. o. obscurus* to the coast region between central Washington and Humboldt Bay, California, and the inclusion of Vancouver Island in the range of *P. o. griseus*.

In plotting a map of the general range of *Perisoreus obscurus* (roughly, as needs be, considering the few definite stations from which the species has been recorded) it is interesting to note the positions of the type localities of the three described subspecies, *obscurus* from Shoalwater Bay, Pacific County, Washington, *griseus* from Keechelus Lake, Kittitas County, Washington, and *rathbuni* from Lake Crescent, Clallam County, Washington. These three stations are about equidistant apart, a little over a hundred miles distant each from each, forming a small triangle about at the center of the range of the species. As an unfortunate result it follows that however the species *obscurus* may be divided into distinguishable races the individuals selected as types have been taken at points where intergradation of characters might be expected to occur, and not from regions where extremes of differentiation are found.

Perisoreus obscurus rathbuni is described as differing from *P. o. obscurus* in darker coloration and somewhat greater size. As regards color it may be observed that there are several bird races of the northwest coast that appear to attain to the darkest extremes of shades on the mainland of the Puget Sound region. In the Bewick Wren (*Thryomanes bewicki*) for example, specimens from this section are appreciably darker than those from Vancouver Island to the northward or from the mainland to the southward. (See Swarth, Proc. Calif. Acad. Sci., 4th ser., vol. 6, 1916, p. 65.) In the Spotted Towhee (*Pipilo maculatus*), although there is no extensive series at hand from the mainland about Puget Sound, still, an adult male from Seattle is darker colored than any Vancouver Island bird. Then, as to the size differences shown by the Oregon Jays of the several regions, it will be noted that *P. o. rathbuni* is somewhat larger than *P. o. obscurus*, to the southward. Typical *obscurus*, again, is larger than birds still farther to the southward, as shown by a large series from the Humboldt Bay region, California, here available.

Thus it is seen that from the southern extreme of the species at Humboldt Bay, northward to Puget Sound, there is gradual increase in size and intensified darkness of color. It is just such a case as that concerning the Wren-tit, presented and commented upon with such clearness some years ago by Osgood, in THE CONDOR (vol. 3, 1901, p. 50). The diagrams illustrating the points made in that paper might well be studied in connection with the questions involved in the

*Description of a new subspecies of *Perisoreus obscurus*. By Harry C. Oberholser. Proc. Biol. Soc. Wash., vol. 30, Dec. 1, 1917, pp. 185-188.

nomenclature of *Perisoreus obscurus*. In the case of the Oregon Jay it will be noted that the matter is complicated through the fact that the type locality of *P. o. obscurus* is at Shoalwater Bay, Washington, about midway of the longitudinal range of the subspecies. Specimens from this region consequently do not exhibit the extremes of size or color characters shown by those to the northward or to the southward. Consequently, if it is considered desirable to split the race it is doubly hard to determine where to draw the line.

The small size of the Humboldt Bay birds is apparently just as good grounds for the naming of a local race from that point as is the dark color of *P. o. rathbuni*. If this were done, however, what is there left of *P. o. obscurus* but an ill-defined intergradient between the two extremes? This, of course, is really what typical examples of *obscurus* are, but the first name having been applied to a bird from this intermediate region it certainly seems best to let it cover the whole variable coast race.

Another point is involved in the relegation by Dr. Oberholser of the Vancouver Island jays to the subspecies *Perisoreus o. griseus*, upon the basis of specimens collected by the present writer and previously reported upon by him (Univ. Calif. Publ. Zool., vol. 10, 1912, p. 48). In the paper cited these birds were called *P. o. obscurus*, with comment upon certain peculiarities exhibited by the series, in which course due regard was paid to the several questions involved. These birds, according to Dr. Oberholser, are in color similar to *griseus*, but are somewhat smaller than that race, being of about the same size as his *P. o. rathbuni*. He is thus inclined here to place greater weight upon characters of color than of size. I do not agree with him, considering that these birds probably exemplify a final step in the general increase in size northward of *P. o. obscurus*.

As to color, the adults of the Vancouver Island series are either in badly worn plumage or else are molting and not fully feathered. Their apparently paler coloration than some freshly molted and fully feathered birds from the mainland coast region may or may not be due to their imperfect condition. Juveniles from Vancouver Island are slightly darker colored than examples of *griseus* in comparable plumage from the Warner Mountains, California.

At any rate, even should fully feathered Vancouver Island birds prove to be uniformly pale colored, I still do not believe they should be considered the same as *Perisoreus obscurus griseus* from the arid interior. Such a course would be as much a mistake, and a comparable one, as the error now given sanction by the A. O. U. Check-List (1910, p. 266), where the range of "*Junco hyemalis connectens*" (= *Junco oreganus shufeldti*), as described, includes Vancouver Island. The jays do not range over the whole island, but, during the nesting season at least, are restricted to the higher mountains. Any peculiarity in their appearance should be recognized as the probable result of isolation or environment; it seems to me utterly futile to attempt to link together races so remote on the basis of slight and questionable resemblances in some particulars. In this connection attention should again be directed to the exactly comparable case of the Northwest Bewick Wren, cited earlier in this paper.

To sum up, it is the writer's opinion, in view of the foregoing arguments, that the name *Perisoreus o. obscurus* should be applied to the coastal race extending from Humboldt Bay to Vancouver Island, and *P. o. griseus* to the form of the arid interior—exactly the treatment accorded the two subspecies by Ridgway (Birds N. and Mid. Am., III, 1904, pp. 372-374).

Berkeley, California, December 31, 1917.